

SPECIFICATION AMENDMENTS

Please replace the paragraph beginning at page 8, line 1, with the following paragraph:

FIG. 15 is a fragmentary side elevational view of the first embodiment of the lift axle suspension system shown in FIG. 11 except the lift axle suspension is shown at ~~jounce~~ rebound height, which is a lowermost position;

Please replace the paragraph beginning at page 9, line 1, with the following paragraph:

FIG. 21 is a fragmentary side elevational view of the second embodiment of the lift axle suspension system of FIG. 19 where the lift axle suspension is shown at ~~jounce~~ rebound height;

Please replace the paragraph beginning at page 9, line 13, with the following paragraph:

FIG. 25 is a fragmentary side elevational view of the third embodiment of the lift axle suspension system of FIG. 23 where the lift axle suspension is shown at ~~jounce~~ rebound height;

Please replace the paragraph beginning at page 10, line 4, with the following paragraph:

FIG. 29 is a fragmentary side elevational view of the fourth embodiment of the lift axle suspension system of FIG. 27 where the lift axle suspension is shown at ~~jounce~~ rebound height; and

Please replace the two paragraphs beginning at page 20, line 15, with the following two paragraphs:

When a hole or other downward deviation in the road surface is encountered, jounce rebound occurs. During jounce rebound, the wheel assembly enters into an obstruction (typically only one wheel enters at a given time although both may) such as a hole in the road surface whereby the wheel assembly and associated lift axle 18 suddenly drop due to the lack of a surface thereunder and the overall weight of the system as is shown by arrow C in Figure 15. The result is the wheel assembly 22, at least a portion of lift axle 18 relative in position to wheel assembly 22, and all parts connected thereto suddenly drop including the axle connector bracket 66 in relation to the overall vehicle. Bracket 66 pivots downward about its connection points to articulating arms 62 and 64 which similarly pivot about its connection points to mounting bracket 50. The result is a larger gap between the frame rails 14 and lift axle 18 caused by a pivoting of the lift axle suspension at two degrees of freedom about mounting bracket 52 as is generally shown in Figure 15 by arrow D.

This pivoting action is allowed until hammers 134 on arms 124 and 128 interact as is shown in Figure 16 whereby further dropping of the wheel assembly 22 and lift axle 18 is prohibited. In more detail, articulating arms 62 and 64 as shown in Figure 16 pivot clockwise about their respective pivotal connections to mounting bracket 52 pulling diaphragm chamber 122 that is affixed to arm 62 downward in the same direction. Hammers 134 pivot toward one another until interaction whereby further pivoting of arms 124 and 128 is prohibited, and ultimately further pivoting of articulating arm 62 is prohibited because clevis 138 is seated against lower chamber 146 in both diaphragm chambers 122 and 130. The system has bottomed out at jounce rebound height.

Please replace the paragraph beginning at page 26, line 8, with the following paragraph:

Operationally, and referring specifically to Figures 19-20, the system is at desired equilibrium whereby the inflation of the air bellows 110 coupled with the weight of the frame rails 14, the articulating arms 262 and 264, axle bracket 66, lift axle 18, and the lift assembly 320 set the overall suspension at a ride height. When a hole or other downward deviation in the road surface is encountered, ~~jounce~~ rebound occurs as the wheel assembly and associated lift axle 18 suddenly drop due to the lack of a surface thereunder and the overall weight of the system as is shown by arrow H in Figure 21. The result is the wheel assembly 22, at least a portion of lift axle 18 relative in position to wheel assembly 22, and all parts connected thereto suddenly drop including the axle connector bracket 66 in relation to the overall vehicle. Bracket 66 pivots downward about its connection points to articulating arms 262 and 264 which similarly pivot about its connection points to hanger portion 252B and cover plate 261 as shown in Figure 21 as a clockwise rotation. The result is push rods 136 being forced inward as shown by arrows I such that bladder plate 142 further compresses the fluid within the upper chamber 144. This increased compression acts as a dampener to slow or stop the downward translation of the wheel assembly and associated lift axle 18.

Please replace the paragraph beginning at page 29, line 1, with the following paragraph:

As a result, when ~~jounce~~ rebound occurs as is shown in Figure 25, the lift axle 18 drops as shown by arrow M resulting in axle connector bracket 66 and arm 262 and 264 movement as described above for the second embodiment. As shown by arrow N, this forces push rod 136 of the lower diaphragm chamber 122 inward where the pressurized upper chamber dampens the ~~jounce~~ rebound as is well known in the art.

Please replace the paragraph beginning at page 30, line 8, with the following paragraph:

As is shown in Figures 27-28, the diaphragm chambers are positioned in a horizontal or substantially horizontal manner while in the third embodiment the diaphragm chambers are oriented in a vertical or substantially vertical manner. Otherwise, the lift axle suspension system works in the same manner described above for the third embodiment whereby ~~jounce~~ rebound causes the lift axle to drop as shown by arrow Q thus pushing the push rods inward as shown by arrows R as is shown in Figure 29, while lifting occurs by pressurizing the upper chambers causing the push rods to push outward as shown by arrows S this causing the lift axle to be lifted as shown by arrow T in Figure 30.